

REMARKS

By this Amendment, the claims are amended merely to clarify the recited subject matter. Claims 1-31 are pending. Claims 29-31 have been added.

Applicants are pleased to note the Office Action indicated that claims 15-18 are allowed.

I. Objection to the Specification

The Examiner contended that the phrase "because this allows speech to be transmitted between the transcoder 122 and the base station controller in cellular radio form," disclosed in the specification in page 6, line 8, is confusing because transcoder 122 is part of the base station controller 102. Applicants respectfully disagree.

Applicants submit that in its description of the various embodiments, the specification clearly states that the transcoder 122 is part of the base station system 126 (see, e.g., specification page 5, lines 34-35). In addition, the specification states that the transcoder 122 is usually located as close to a mobile services switching center 132 as possible (see, e.g., specification, page 6, lines 6-9). Therefore, one of ordinary skill in the art would not interpret that the transcoder 122 is necessarily part of the base station controller 102. Applicants submit that the schematic illustration in Figure 1 of the transcoder 126 being inside the "box" representing the base station controller 102 is merely an illustration of one possibility in which the transcoder 122 can be located at the base station controller 102 site. However, this does not, in any way, limit the transcoder 122 to be only a "part of" the base station controller 102.

The Examiner contends that the phrase "As the figure shows, every other synchronous burst SB would extend to two normal bursts NB, which is not desirable," described in the specification in page 8, line 27, is not comprehensible from any figure. Applicants respectfully disagree.

Applicants respectfully submit that one of ordinary skill in the art would understand that Figure 3 clearly shows that for the BTS 1 and BTS 2 the timing of the synchronized bursts SB coincides with the timing of their normal bursts. Therefore, two synchronized bursts SB may be transmitted in place of one normal burst NB (see, for example, page 8 lines 12-22 of the specification). Applicants respectfully submit that Figure 3 also clearly shows that for the BTS 3 and BTS 4 the timing of the synchronized bursts SB and the timing of their normal bursts NB do not match. As a result, only one synchronized burst SB is transmitted in place of one normal burst NB. If an additional synchronized burst SB is present between, for

example, the first and second synchronized bursts in BTS 3, the additional synchronized burst SB would extend over the first and the second normal bursts NB, which may not be desirable.

II. Claim Rejections Based on 35 USC § 112

The Office Action rejected claims 1, 4, 7-8, 10-12, 14-15, 18, 20-22, 25 and 28 under 35 U.S.C. §112, second paragraph.

Applicants have amended the claims to further clarify the claim language including ensuring that all the limitations in the claims have sufficient antecedent basis.

In particular, Applicants have amended claims 2-14 to recite “The method...” instead of “A method...” as requested by the Examiner.

Applicants have also amended claims 16-28 to recite “The radio...” instead of “A radio...” as requested by the Examiner.

Applicants also have amended claims 7, 11-12, 21 and 25 and deleted the phrases “such as” and “i.e.” to further clarify the claim language.

Applicants have deleted the limitation “the channel codec (216) is arranged to form a synchronized channel,” in claim 15 and added new claim 31 which depends from claim 15 and further recites that “the channel codec is arranged to further form a synchronized channel.” Applicants respectfully submit that the channel codec is not only able to form a normal channel for normal non-synchronized operation but also able to form a synchronized channel for synchronized operation.

In view of the above, Applicants respectfully submit that all pending claims are in full compliance with §112, second paragraph. Thus, Applicants respectfully request that the rejection of claims 1, 4, 7-8, 10-12, 14-15, 18, 20-22, 25 and 28 under 35 U.S.C. §112, second paragraph be withdrawn.

III. Objection to the Drawings

The Examiner contended that the limitations “synchronized channels...two radio transmitters, where normal radio bursts are transmitted...asynchronously...obtaining synchronized timing...” are not illustrated in the drawings.

To the contrary, Applicants submit that the language in claim 1 is fully illustrated in the drawings. For example, Figure 1 shows a plurality of transceivers (TRX) 114, and one of ordinary skill in the art would understand that a transceiver is a transmitter/receiver. Thus, “two radio transmitters” is illustrated in the drawings. With regard to the limitation “obtaining synchronized timing,” Applicants respectfully submit that this limitation is also illustrated in the drawings. For example, Figure 7 which is a flowchart illustrating the

implementation of the method according to the invention, shows that synchronized timing is obtained in block 702 (see page 10, lines 27-29 of the specification). Therefore, the limitation “obtaining synchronized timing” is fully illustrated in the drawings.

The Examiner contended that the limitations “the coordination between the transmission of radio bursts from at least two different base stations comprising at least one radio transmitter...multiplexer is arranged to insert a synchronized radio burst ...synchronized timing,” recited in claim 15 are not illustrated in the drawings. Applicants respectfully disagree.

Applicants respectfully submit that the above limitation is illustrated, for example, in Figure 1. Specifically, the base station 100 is illustrated by “a box” in Figure 1 and in page 4, lines 6-8 of the specification it is stated, for example, that several base stations 100 are controlled ... by a base station controller 102. Therefore, contrary to the Examiner’s contention, the above limitation is fully illustrated in the drawings.

IV. Claim Rejections Based on 35 USC § 102

The Examiner rejected claims 1-3 and 14, under 35 U.S.C. § 102(b), as being anticipated by Hita de la Torre et al. (US patent No. 5,533,028) (hereinafter “Torre”). Applicants traverse the rejection because the cited reference fails to teach or suggest all the features recited in the rejected claims.

For example, the Torre reference fails to teach or suggest the claimed method of transmitting a synchronized channel in a radio transmitter, in which, *inter-alia*, normal radio bursts are transmitted on a normal channel asynchronously, as recited in independent claim 1 and its dependent claims.

Torre merely teaches how to establish communications between base stations and base station controllers without performing interface conversions (see Col. 1, lines 57-60 in Torre). The base station and the base station controller are interconnected by a pair of unidirectional transmission lines. In Torre, the base station communicates by a radio link with a mobile terminal using a time division multiple access protocol at a bit transmission rate including a series of bursts. Each of the series of bursts comprises a guard field (G), a synchronization field (S1) and a radio link information field (D). The base station and the base station controller communicate via bursts, each of which comprises an information field (F) that conveys information that is the same as the information conveyed by the radio link information field (D), a reduced synchronization field (S2) and a control field (C) to convey control and signaling information between the base station and its base station controller. The communication between the base station and the base station controller takes place at a

bit rate equal to the bit transmission rate for radio link, in frames, each of which is transmitted as a series of bursts that correspond one-for-one to the bursts of the radio link.

Torre clearly does not disclose, teach or suggest that the synchronized radio burst is transmitted in place of the normal radio burst such that transmission of the synchronized radio burst is synchronized with the obtained synchronized timing, as recited in claim 1.

Therefore, Applicants respectfully submit that claim 1, and claims 2, 3 and 14 which directly depend from claim 1, are patentable. Thus, Applicants respectfully request that the rejection of claims 1-3 and 14 under § 102 (b) be withdrawn. Moreover, as best understood, none of the references of record, including Torre, teach the claimed combination of elements recited by claims 1-3 and 14. As such, none of these claims can be rendered unpatentable in view of the references of record.

V. Claim Rejections Based on 35 USC § 103

The Examiner rejected claim 4 under 35 U.S.C. § 103(a) as being unpatentable over Hita de la Torre et al. (US patent No. 5,533,028) (hereinafter “Torre”), in view of Alvarez et al. (US Patent No. 4,397,019) (hereinafter “Alvarez”). The Examiner rejected claims 5, 6 and 8 under 35 U.S.C. § 103(a) as being unpatentable over Hita de la Torre et al. (US patent No. 5,533,028) (hereinafter “Torre”), in view of Bilitza et al. (US Patent No. 5,390,216) (hereinafter “Bilitza”). The Examiner rejected claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Hita de la Torre et al. (US patent No. 5,533,028) (hereinafter “Torre”), in view of Maloney et al. (US Patent No. 6,108,555) (hereinafter “Maloney”). The Office Action rejected claims 9 and 10 under 35 U.S.C. § 103(a) as being unpatentable over Hita de la Torre et al. (US patent No. 5,533,028) (hereinafter “Torre”), in view of Poon et al. (US Patent No. 5,940,380) (hereinafter “Poon”). The Examiner rejected claim 11 under 35 U.S.C. § 103(a) as being unpatentable over Hita de la Torre et al. (US patent No. 5,533,028) (hereinafter “Torre”), in view of Uddenfeldt (US Patent No. 5,805,633) (hereinafter “Uddenfeldt”). The Examiner rejected claim 12 under 35 U.S.C. § 103(a) as being unpatentable over Hita de la Torre et al. (US patent No. 5,533,028) (hereinafter “Torre”), in view of Silventoinen et al. (US Patent No. 6,108,553) (hereinafter “Silventoinen”). The Examiner rejected claim 13 under 35 U.S.C. § 103(a) as being unpatentable over Hita de la Torre et al. (US patent No. 5,533,028) (hereinafter “Torre”), in view of Avis (US Patent No. 6,332,086) (hereinafter “Avis”).

Applicants traverse the rejection because the cited prior art references, analyzed individually or in reasonable combination, fail to teach or suggest all the features recited in the rejected claim. Claims 4-13 are directly or indirectly dependent from claim 1. Therefore,

for at least the reasons identified above with respect to the § 102(b) rejection of claim 1, Applicants respectfully submit that claims 4-13 are patentable over Torre. Moreover, as noted above, none of the cited references overcomes the deficiencies noted above in Torre. Consequently, the teachings of Torre and the other cited references, analyzed individually or in any reasonable combination, fail to disclose, teach or suggest the subject matter recited in claims 4-13. Therefore, Applicants respectfully submit that claims 4-13 are patentable and respectfully request that the rejection of claims 4-13 under § 103(a) be withdrawn.

Claims 29-31 have been newly added. Support for the claim language may be found throughout the original disclosure. Claim 29 depends indirectly from claim 1. Therefore, claim 29 is patentable for at least the reasons provided above with respect to claim 1. Claims 30 and 31 depend from allowed claim 15. Therefore, Applicants respectfully submit that claims 30 and 31 are allowable by virtue of their dependence on allowed claim 15.

VI. Conclusion

All objections and rejections having been addressed, Applicants request issuance of a notice of allowance indicating the allowability of pending claims 1-31. If anything further is necessary to place the application in condition for allowance, Applicants request that the Examiner contact Applicants' undersigned representative at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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